

REMARKS

The Official Action constitutes a requirement for restriction.

Applicants elect to prosecute the invention of Group I, claims 20, 22-27, 29 and 30, with traverse.

Claims 20 and 21 have been amended to incorporate the limitation of claim 23. Claim 22 has been canceled without prejudice. Claims 20 and 21 thus recite the same limitation as claim 31, requiring the NDPK to carry a label which gives a different detectable signal when the enzyme is phosphorylated from when it is unphosphorylated. Claims 20, 21 and 31 have been further amended to clearly define over Biondi, by requiring that the label be carried in both the phosphorylated and unphosphorylated forms of NDPK. This amendment is supported for example by claim claim 24 and pages 9-11 of the specification.

The basis for the restriction requirement is that there is no single inventive concept recited in claims 20, 21 and 31 because they lack the same or corresponding special technical feature.

Claims 20, 21 and 31 have been amended to recite the same special technical feature.

Accordingly, it is respectfully submitted that all pending claims 20-38 are a single inventive concept which should be examined together.

In addition, the special technical feature recited in claims 20, 21 and 31 is not disclosed or suggested by Biondi.

Biondi teach a ³²P-labeled human NDPK. The labeled NDPK according to the claimed invention is clearly distinguishable from the ³²P-labeled NDPK of Biondi.

The claims require that the NDPK “carry a label which gives a different detectable signal when the enzyme is phosphorylated from when it is unphosphorylated”. A ³²P-labeled NDPK cannot give a “different detectable signal”, because the ³²P gives the same detectable signal whether it is attached to the enzyme or not. In other words, the ³²P atom will emit the same radiation whether it is attached to the NDPK-P or attached to the ATP.

Furthermore, the claims have been amended to clearly distinguish over Biondi, to recite that the label be carried in both the phosphorylated and unphosphorylated forms of the enzyme.

Such claim limitations clearly define over the ^{32}P label of Biondi which is detached from the NDPK in its unphosphorylated form.

The present invention is novel and inventive over the prior art. The invention is based on the finding that the phosphoenzyme intermediate is stable over a time scale which allows its detection and measurement using an appropriate label. Once the inventors found this, they realized that there are two ways of detecting amounts of NDP and NTP - either look for formation of the stable NDPK-P, which indicates the presence of NTP, or look for its breakdown, which indicates the presence of NDP. Both methods rely on using the label to monitor the relative levels of NDPK and NDPK-P. Thus both methods revolve upon the same key feature.


In view of the foregoing amendments, unity of invention exists between claims 20-38. This is supported, for example, by Example 6 on page AI-58 of Annex B of the MPEP, a copy of which is enclosed.

Accordingly, it is respectfully submitted that the restriction requirement should be withdrawn and all pending claims be examined after the foregoing amendments.

Favorable action on the merits is solicited.

Respectfully submitted,

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20. (Amended) A process for detecting the presence of a nucleoside diphosphate in a sample, comprising a step of detecting the dephosphorylation of the phosphoenzyme form a nucleoside diphosphate kinase (NDPK), wherein the NDPK is modified to carry a label in both is phosphorylated and unphosphorylated forms, which label gives a different detectable signal when the enzyme is phosphorylated from when it is unphosphorylated. [by detecting a change in a characteristic of the NDPK which differs between its phosphorylated and unphosphorylated forms.]

21. (Amended) A process for detecting the presence of a nucleoside triphosphate in a sample, comprising a step of detecting the phosphorylation of a nucleoside diphosphate kinase (NDPK) to the phosphoenzyme form, wherein the NDPK is modified to carry a label in both its phosphorylated and unphosphorylated forms, which label gives a different detectable signal when the enzyme is phosphorylated from when it is unphosphorylated. [by detecting a change in a characteristic of the NDPK which differs between its phosphorylated and unphosphorylated forms.]

24. (Amended) The process of claim 20 or claim 21 [23], wherein the NDPK carries a fluorescent label.

31. (Amended) NDPK which is modified to carry a label in both its phosphorylated and unphosphorylated forms, which label gives a different detectable signal when the enzyme is phosphorylated from when it is unphosphorylated.

[ANNEX B, CONTINUED]

PART 2

EXAMPLES CONCERNING UNITY OF INVENTION



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The application of the principles of unity of invention is illustrated by the following examples for guidance in particular cases.

I. CLAIMS IN DIFFERENT CATEGORIES

Example 1

Claim 1: A method of manufacturing chemical substance X.

Claim 2: Substance X.

Claim 3: The use of substance X as an insecticide.

Unity exists between claims 1, 2 and 3. The special technical feature common to all the claims is substance X.

Example 2

Claim 1: A process of manufacture comprising steps A and B.

Claim 2: Apparatus specifically designed for carrying out step A.

Claim 3: Apparatus specifically designed for carrying out step B.

Unity exists between claims 1 and 2 or between claims 1 and 3. There is no unity between claims 2 and 3 since there exists no common special technical feature between the two claims.

Example 3

Claim 1: A process for painting an article in which the paint contains a new rust inhibiting substance X including the steps of atomizing the paint using compressed air, electrostatically charging the atomized paint using a novel electrode arrangement A and directing the paint to the article.

Claim 2: A paint containing substance X.

Claim 3: An apparatus including electrode arrangement A.

Unity exists between claims 1 and 2 where the common special technical feature is the paint containing substance X or between claims 1 and 3 where the common special technical feature is the electrode arrangement A.

However, unity is lacking between claims 2 and 3 since there exists no common special technical feature between them.

Example 4

Claim 1: Use of a family of compounds X as insecticides.

Claim 2: Compound X_1 belonging to family X.

Provided X_1 has the insecticidal activity and the special technical feature in claim 1 is the insecticidal use, unity is present.

MANUAL OF PATENT EXAMINING PROCEDURE

Example 5

- Claim 1: A process for treating textiles comprising spraying the material with a particular coating composition under special conditions (e.g., as to temperature, irradiation).
- Claim 2: A textile material coated according to the process of claim 1.
- Claim 3: A spraying machine for use in the process of claim 1 and characterized by a new nozzle arrangement providing a better distribution of the composition being sprayed.

The process according to claim 1 imparts unexpected properties to the product of claim 2.

The special technical feature in claim 1 is the use of special process conditions corresponding to what is made necessary by the choice of the particular coating. Unity exists between claims 1 and 2.

The spraying machine in claim 3 does not correspond to the above identified special technical feature. Unity does not exist between claim 3 and claims 1 and 2.

Example 6

- Claim 1: A fuel burner with tangential fuel inlets into a mixing chamber.
- Claim 2: A process for making a fuel burner including the step of forming tangential fuel inlets into a mixing chamber.
- Claim 3: A process for making a fuel burner including casting step A.
- Claim 4: An apparatus for carrying out a process for making a fuel burner including feature X resulting in the formation of tangential fuel inlets.
- Claim 5: An apparatus for carrying out a process for making a fuel burner including a protective housing B.
- Claim 6: A process of manufacturing carbon black including the step of tangentially introducing fuel into a mixing chamber of a fuel burner.

Unity exists between claims 1, 2, 4, and 6. The special technical feature common to all the claims is the tangential fuel inlets. Claims 3 and 5 lack unity with claims 1, 2, 4, and 6 since claims 3 and 5 do not include the same or corresponding special technical feature as set forth in claims 1, 2, 4, and 6. Claims 3 and 5 would also lack unity with one another.

Example 7

- Claim 1: A high corrosion resistant and high strength ferritic stainless steel strip consisting essentially of, in percent by weight: Ni=2.0-5.0; Cr=15-19; Mo=1-2; and the balance Fe having a thickness of between 0.5 and 2.0 mm and a 0.2% yield strength in excess of 50 kg/mm squared.
- Claim 2: A method of producing a high corrosion resistant and high strength ferritic stainless steel strip consisting essentially of, in percent by weight: Ni=2.0-5.0; Cr=15-19; Mo=1-2; and the balance Fe, comprising the steps of: hot rolling to a thickness between 2.0 and 5.0 mm; annealing the hot rolled strip at 800-1000°C under substantially no oxidizing conditions; cold rolling the strip to a thickness of between 0.5 and 2.0 mm; and final annealing the cold rolled strip at between 1120 and 1200°C for a period of 2-5 minutes.

Unity exists between product claim 1 and process claim 2. The special technical feature in the product claim is the 0.2% yield strength in excess of 50 kg/mm squared. The process steps in claim 2 inherently produce a ferritic stainless steel strip with a 0.2% yield strength in excess of 50 kg/mm squared. Even if this feature is